MEDIA TECHNOLOGY & INNOVATION

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tech-i

Strengthening sovereignty and resilience in Europe's public media

Plus

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Issue 68 • June 2026

Cover story: Sovereignty and resilience have become defining concerns for Europe's public media as audiences and infrastructure increasingly migrate to IP. In this issue, Antonio Arcidiacono argues for pushing AI to the edge (p3), Paul Tweedy maps the risks of internet-based distribution (p9), our report from HORIZONS 2026 sets out the trade-offs in play (p10), and Vincent Sneed explains what's at stake in the EU's Digital Networks Act (p13).

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From one-to-many broadcasting to many-to-one media

Antonio Arcidiacono, Director of Technology & Innovation, EBU

AI brings real benefits to media users: personalization, accessibility, new viewing experiences. These benefits, however, tend to imply a huge increase in energy consumption at data centres and across the network, and raise legitimate concerns about data privacy.

We need to think differently – evolving media services towards a *distributed* AI architecture that is more personalized, efficient and democratic. The fundamental idea is to push key AI processes out of the data centres, to the edge of the network and onto the devices in the users' homes, referred to in the industry as Customer Premises Equipment (CPE).

SUSTAINABILITY & PRIVACY

The sustainability case is clear: processing AI tasks locally eliminates the energy needed to transmit large volumes of data to centralized cloud facilities and back, also reducing backbone network traffic and associated energy consumption. CPE devices can run AI tasks during hours of solar generation, using renewable energy directly and avoiding the intensive cooling demands of centralized data centres.

And what about privacy? Running intelligence in CPE devices keeps sensitive personal data on the user's premises, achieving true data sovereignty. In this way, individuals maintain direct control over what data is processed and shared, which makes it easier for service providers to comply with data protection regulations like GDPR.

In a further advantage, decentralization would eliminate single points of failure and the massive data concentration that is prone to centralized attacks. Models can still be improved but through distributed learning,

Antonio Arcidiacono

without centralizing raw data

From a technical perspective, such a multilayer system would function effectively with edge devices handling routine tasks while cloud resources manage complex training and coordination. This requires the development of efficient, lightweight AI models optimized for edge deployment – like those Apple and Qualcomm are developing for smartphones – and demands coordination between the edge and cloud layers. The vision is made possible by the continued improvements in edge AI chips and CPE capabilities.

BETTER PERSONALIZATION

The proposed model makes it possible to adjust content recommendations and formatting based on the local context – time of day, device capabilities, user mood or activity – with viewing habits and preferences analysed entirely on-device. Local AI enables real-time interaction with educational content, news shows, or entertainment. Live sports can be enhanced with locally generated overlays, statistics, and multiple viewing angles rendered on-device, while fiction could be adapted based on aggregated local audience responses.

Accessibility improves through locally performed translation, lip-sync, subtitling, audio description, with sign-language interpretation possible on more capable devices. Content authenticity is assured through C2PA-based tracking of origin and modifications.

At the production end, too, new possibilities are enabled. Multiple creators could be working on shared projects with only metadata and deltas synchronized, not raw footage. Broadcast and peer-to-peer content distribution could reduce central infrastructure load and CDN costs.

None of this will happen unless it makes sense for the bottom line. New business models could see users contributing edge computing power in exchange for premium content access. Privacy concerns around lucrative addressable advertising can again be addressed via on-device rendering. Original content can be monetized with AI-managed rights and royalties.

In uncertain times, a failure of infrastructure could see hybrid networks deliver critical information, with disaster warnings and public safety messages tailored to local conditions. Local AI could help organize community responses during emergencies.

This shifts media from a one-to-many broadcast model to a many-to-one, adaptive ecosystem, where the distinction between creators and consumers blurs, all while respecting privacy and optimizing energy use. And it's a model where public service media can find a natural home.

NTS 2026 charts the road to dynamic production

The Dynamic Media Facility (DMF) takes centre stage at this year's EBU Network Technology Seminar, as the concept moves from architectural framework into deployed reality. Sessions will track the v2.0 reference architecture, Media eXchange Layer (MXL) updates, and the work of the EBU/AMWA Joint Taskforce on flow connection, compute resource management and end-to-end synchronization.

Real-world experience runs through the programme, with case studies covering software-based production, cloud broadcast platforms and how recent Olympic productions have put dynamic workflows to the test. A dedicated tutorial track offers practical grounding in MXL and in network automation with tools such as NetBox and Ansible.

Other sessions tackle what is happening 'under the hood' – Ultra Ethernet, Kubernetes, facility orchestration – alongside media transport developments including IPMX and TAMS, and a closing block on cybersecurity, the Cyber Resilience Act and NIS2.

NTS 2026 takes place in Geneva on 9–10 June, bringing together the broadcast engineers, network architects, cloud specialists and vendor partners shaping the next generation of media production infrastructure.

Full programme and registration at: https://tech.ebu.ch/nts2026

DMF reference architecture v2.0 published

The Dynamic Media Facility project now has a logo, which also forms the basis of branding for the JT-DMF, the Joint Task Force between the EBU and AMWA (Advanced Media Workflow Association). One of the first appearances of the new logo was on the cover of the freshly published v2.0 of the *Dynamic Media Facility: Reference Architecture*.

The April 2026 update of the white paper reflects two years of community learning since the original was prepared for IBC 2024. It refines the six-layer model and orchestration approach, and incorporates the open-source MXL project.

The document sets out where further work is needed – including resource management patterns for multi-vendor clusters, end-to-end synchronization between DMF and synchronous systems, and provisioning across multiple clusters – much of which now sits with JT-DMF.

See: https://tech.ebu.ch/dmf

EBU Technical Committee streamlines its working structure

The EBU Technical Committee (TC) is implementing a new structure for its working groups, designed to sharpen strategic focus and accelerate the pace at which Member priorities translate into practical outcomes.

The change sees the previous arrangement of five Strategic Programmes – and the many Project Groups operating beneath them – being replaced with a leaner architecture: three Strategic Programmes (SPs) and three Focus Groups (FGs), all reporting directly to the TC. The new structure, approved by the TC in January, is currently being rolled out with the aim of becoming operational by the end of June.

The three Strategic Programmes address broad, long-running thematic areas and may cluster sub-activities beneath them. They are:

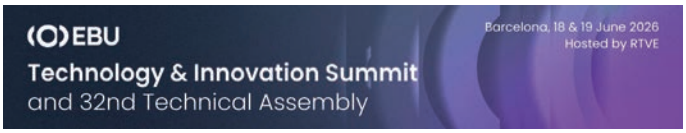
- **SP Connect**, chaired by Massimiliano Babbucci (RSI), covering distribution, platforms and audience-facing products;
- **SP Media Production and Transformation**, chaired by Stephan Heimbecher (SWR); and
- **SP Infrastructure and Media Cybersecurity**, chaired by Phil Tudor (BBC) with Gerben Dierick (VRT) as co-chair.

The three Focus Groups are intended to deliver swift answers on specific strategic questions and business priorities. They are:

- **FG AI Accelerator**, chaired by Stefan Kollinger (ORF);
- **FG Cloud Strategies**, chaired by Malte Blumberg (SWR/ARD); and
- **Future of Spectrum**, chaired by David Hemingway (BBC).

The TC will continue to assess strategic relevance – Member needs, market developments, EBU priorities and available resources – when setting up, evolving or disbanding activities. Focus Groups may, over time, become Strategic Programmes, fold into existing ones, or be wound down once their work is complete. Members will see the new structure reflected progressively on tech.ebu.ch over the coming weeks. Some group names and details may still evolve as scoping is finalized.

A more participatory T&I Summit in Barcelona



This year's EBU Technology & Innovation Summit has been reimagined to put active participation at its centre. Passive presentations are largely giving way to formats designed to ensure more voices are heard, more ideas come to the surface, and more meaningful connections are created – between the Technical Committee and working group leadership, between Member organizations, and across the EBU technology community as a whole. The 32nd EBU Technical Assembly will be embedded within the Summit.

The event opens with an address from EBU Director-General Noel Curran, who will introduce the incoming CTO Annsofi Eriksson. The programme continues with reflections and insights from the leadership of the Technical Committee (TC) and of the T&I Department, including an overview of the new working groups structures. Event host, RTVE, will share some of its significant technology projects in 'proud-to-present' mode.

This being an election year, candidates standing for election to the next TC will have the chance to share their vision through a series of mini-panels. The afternoon weaves voting rounds together with facilitated discussions hosted by the chairs of the TC's Strategic Programmes and Focus Groups. These will be followed by an open panel debate on the most pressing challenges facing the PSM technology community.

The second morning is given over to an Open Space session – two rotations of parallel discussions on topics proposed and prepared by the community, with concrete next steps captured for follow-up.

The Summit takes place on 18–19 June, hosted by RTVE in Barcelona. The event is for EBU Members only, with attendance by invitation.

SAVE THE DATE

MXF Plugfest

Where: Hessischer Rundfunk, Frankfurt
When: 3–5 November 2026
Topics: MXF interoperability testing, ADM, C2PA, Quality Control, etc.
Contact Stephan Heimbecher for more information.

EBU and CBC/Radio-Canada take NAB Technology Innovation Award

The EBU and CBC/Radio-Canada won this year's NAB Technology Innovation Award for their open-source video player built on C2PA, the Coalition for Content Provenance and Authenticity standard for tracking how digital media is created and edited. The video-player project targets making content authenticity not just verifiable but understandable to the people watching.

Willem Vermost (EBU, centre) and Maxim Caron (CBC/Radio-Canada, right) at the NAB Technology Innovation Award ceremony 2026.

CBC/Radio-Canada played a dual role, both testing the player and integrating it into its own newsroom workflows, showing how provenance data can be put to work in day-to-day production. Combined with the project's standards-based architecture, that practical grounding makes it a useful stepping stone towards authenticity infrastructure at scale.

The player goes further than basic signature checks. By combining the C2PA Trust List with the IPTC Origin Verified News Publisher framework – run by the standards body for the news media industry – it adds a layer of organizational identity verification, telling the viewer not just that content has not been tampered with, but that it comes from a credible, verified publisher.

The code is on GitHub under Apache 2.0, and ongoing development will be hosted by the Security4Media association.

Try the online demo at:
https://security4media.github.io/c2pa-video-player

Nominees for the EBU Technology & Innovation Award 2026

The winner of the EBU Technology & Innovation Award 2026 will be announced during the EBU T&I Summit in Barcelona on 18 June.

ORF Content Management Center *ORF, Austria • Markus Korhammer*
A full SMPTE ST 2110 transformation of ORF's broadcast operations, uniting radio, television and streaming signal routing across two high-availability zones, with new master control, playout and multifunctional production spaces. Uses one third of the previous rack space.

Dynamic Streaming for the Olympic and Paralympic Games *CBC/Radio-Canada • Félix Poulin*
A real-world deployment of the EBU Dynamic Media Facility Reference Architecture, letting a single operator augment Olympic Broadcast Services streams from a laptop. Over 140 hours of coverage reached peaks of nearly 500,000 viewers on CBC's OTT platform.

Alix: a converged IT-media cloud platform *France Télévisions • Heikel Manai*
A multi-cloud, open-source platform bringing IT and media workflows onto a single Kubernetes foundation, with modules for subtitling, transcription, media processing and AI inference. Sovereign, vendor-neutral and built to support Dynamic Media Facility deployments.

medIAenrich: AI-driven editorial metadata at scale *France Télévisions • Romuald Rat*
An AI platform built with Télécom SudParis that segments programmes into editorial sequences and combines visual, audio and contextual analysis to generate broadcast-grade metadata at a fraction of commercial costs. Free of licence fees for EBU Members.

ARD Sounds: the play button for your day *ARD, Germany • Lukas Krohn-Grimberghe and Stefan Köhler*
A unified digital audio platform that brings podcasts, live radio and event streams from across ARD's regional broadcasters into a single user-centric app, with intelligent recommendations and curated collections aimed at younger, digitally native audiences.

***Fehler im System*: live multi-camera virtual production** *SWR, Germany • Philipp Jacobs*
A new workflow that allows live switching between multiple tracked cameras on a single LED volume, overcoming the single-camera limit of traditional virtual production. Proved on a multi-hour role-playing game streamed live on Twitch.

A framework for Generative AI *Rai, Italy • Mariangela Borneo, Roberto Iacoviello and Alberto Ciprian*
An IBC Accelerator project led by Rai with VRT, YLE, EBU, Globo, ITV and partners, delivering a modular framework that standardizes prompts and metadata across text, image, audio and video tools. Validated through the photorealistic trailer "Echoes of Rome".

Neo: software-defined live production at Olympic scale *SVT, Sweden • Frida Thelin*
A fully software-based production platform running on standard IT hardware, used to deliver ten parallel production environments and OTT channels at the 2026 Winter Olympics – more than 800 hours and 150 sports productions in total.

Machine-learning-assisted MCR audio monitoring *BBC, UK • Paul McGrath*
A model trained to recognize what BBC Radio 5 Live should sound like, alerting when distortion appears that conventional equipment treats as valid audio. Runs on a Raspberry Pi, demonstrating that application-specific machine learning needs neither LLMs nor server racks.

Sustainable production with solar and battery power *ITV, UK • Clive Santamaria*
Hybrid power systems using second-life EV batteries and solar deployed on shoots including I'm a Celebrity and Nobody's Fool, cutting fuel consumption by up to 60%. The team is open-sourcing its learnings as a blueprint for the wider industry.

Intelligent Automation through commodity AI workflows *ITV, UK • Clive Santamaria*
A self-service platform that lets teams across ITV build their own AI-powered automations by connecting everyday tools and systems, with no coding required. More than 2,000 hours of staff time saved in the first six months.

AI Agent Hub: governed multi-model access *ITV, UK • Clive Santamaria*
A single governed interface for switching between approved foundation models and building prompt-based assistants, with central routing, role-based access, audit logging and provenance controls. Trial users reported time savings (70%) and quality gains (over 80%).

Qualitative Enricher: AI reasoning at scale for ITVX *ITV, UK • Clive Santamaria*
An AI service that generates qualitative metadata for ITVX – ranking the most recognizable cast members and describing mood and atmosphere – with a secondary AI scoring outputs and a daily budget cap. Costs less than £10 a month to run.

Eight ways data and AI are reshaping public service media

Alexandre Rouxel reports from the EBU Data Technology Seminar, where participants discussed how AI is moving from isolated experiments into the core fabric of public service media – and where the question of trust was never far away.

For three days in March, data scientists, AI engineers, media technologists and PSM strategists converged on EBU HQ in Geneva for our annual Data Technology Seminar. Their discussions ranged across four key thematic areas: strategy and governance, metadata and infrastructure, AI integration aligned with PSM values, and evaluation and trust. That last one surfaced more often than any other in the questions from the floor, showing the extent to which trust remains at the heart of the PSM mission. Here are eight trends that emerged across the three days.

1. AI moves from experiment to execution. AI is no longer a parallel track to PSM operations but a layer reshaping audience value and internal workflows alike. Germany's DW set out a holistic four-pillar strategy and proposed a cross-broadcaster collaboration platform, while the France Télévisions medIAenrich initiative for metadata generation is to be made available to all EBU Members – both positive signals for platform-level cooperation.

2. Generative AI does not replace structured metadata – it raises its value. Controlled vocabularies still anchor meaning; AI-generated representations of content extend discovery into territory that explicit labels cannot reach. The future of search combines both, illustrated by BBC work on news content. Joint EBU-SMPTE work – including a proposed identifier that registers each AI system as a uniquely addressable entity, so its outputs can be shared across organizations as reliably as any other metadata – points in the same direction.

3. Agents arrive, and they collaborate. AI is shifting from single tools to coordinated agents that orchestrate tasks and interact in group contexts. ZDF's Agentic Audience system, with ten named audience personas coordinated by a moderator agent, offered an early glimpse of multi-agent coordination as a workflow paradigm – explicitly framed as decision support rather than content generation, with editorial responsibility retained by the editor.

Nathalie Mastail-Hirosawa

Alexandre Rouxel is Senior Project Manager for Data and AI at the EBU

4. Content understanding goes deep and multimodal. Production systems are converging on richer understanding across audio, video and text, driven by iterative design and domain adaptation. DW's collaboration with Ethiopian startup Lesan AI on Amharic – framed by the project team as a "low-interest" rather than "low-resource" language, with no commercial offering despite some 57 million speakers – shows PSM filling gaps the market has overlooked.

5. Production AI lives or dies on editorial fit. Embedding AI in production pipelines amplifies efficiency, but the central tension is rarely between human and machine – it is between competing editorial values that automation surfaces. ZDF's Easy Language work, transforming news texts for an audience of 16–20 million in Germany, exposed disagreements between reviewers about where simplification ends and inaccuracy begins.

6. Personalization is calibration, not just algorithm. Recommender systems are evolving to balance engagement, efficiency and public service values. ZDF's A/B testing across three streaming slots showed that the best variant of the same model differed in each, with popularity helping in one slot, hurting in another, and proving neutral in the third – a reminder that recommender tuning is inseparable from interface design.

7. Evaluation becomes a first-class concern. As AI enters production, ad hoc testing no longer suffices. The BBC-EBU News Integrity in AI Assistants Toolkit – drawing on research across 22 PSM organizations, 18 countries and 14 languages – offers a shared taxonomy of failure modes and a framework for structured benchmarking. The clear message from EBU Members: benchmarking is no longer a nice-to-have.

8. Sovereignty is an infrastructure question. Owning the environments on which AI runs is becoming a requirement for scalability, cost control and editorial independence. RTBF's work on running AI at scale on its own GPUs offered a concrete example of what that looks like in practice.

EBU Members can access the DTS 2026 presentations on the tech-i app and via: https://tech.ebu.ch/dts2026

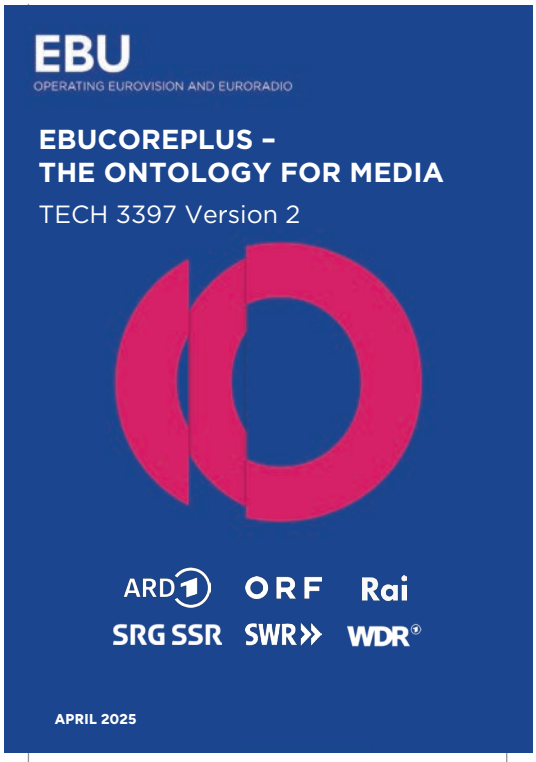
See also page 8

A metadata model EBU Members can rely on

As a growing set of tools eases the path to adoption of EBUCorePlus, the specification is becoming a working backbone across EBU Members, writes **Jürgen Grupp** (ARD).

When EBU Members began sharing their metadata architecture work at this year's Data Technology Seminar, a pattern emerged that we had been waiting some years to see. EBUCorePlus has stopped being a model that organizations explore in isolation and become the common semantic layer around which real architectures are being built.

Colleagues from SRG SSR demonstrated a unified enterprise data platform organized around EBUCorePlus as a domain-based semantic layer spanning content, business and usage. ARD set out how point-to-point integrations between legacy systems had become unsustainably complex, and how EBUCorePlus now provides the blueprint for a domain-hub architecture that replaces that complexity with a single integration layer. ORF showed end-to-end lifecycle modelling – from creation to distribution – expressed as a graph of relationships rather than rigid hierarchies. VRT, NPO and others reported similar journeys, each starting from the same diagnosis: fragmented metadata ecosystems, unclear semantics, and inconsistent business rules accumulated over decades of uncontrolled growth.



BETTER ON-RAMPS

For the EBU Metadata Modelling working group, chaired by the author, this is exactly the inflection point the ontology was designed to support. The signal from the DTS presentations is clear: adoption is accelerating, but Members need better on-ramps. They need clearer documentation, practical guidance, working examples, and tooling that lowers the cost of moving from a conventional relational mindset to a semantic one. Several presenters at DTS explicitly called for this – VRT highlighted gaps in documentation and the need for community feedback; NPO emphasized the difficulty of mapping real-world meaning into graph models without shared modelling practices.

Our response is a coordinated set of resources designed to make EBUCorePlus easier to pick up and easier to deploy. Tech 3397 v2, published in 2025, is the formal specification, replacing the earlier EBUCore and CCDM standards and consolidating the model into a single coherent ontology. Two interactive tools are available: the Ontology Explorer allows visual navigation of classes and semantic relationships, while the Ontology Diff Analyzer highlights changes between versions, which matters as the model evolves and Members need to track what is changing and why.

All of this is hosted as an open-source project on GitHub, where Members can file issues, request changes and contribute. EBUCorePlus is not a product handed down from EBU to its Members; it is built by the community of practitioners who use it, and the working group exists to support that community and drive the adoption of EBUCorePlus as a de facto industry standard.

SHARED VOCABULARY

The convergence visible at DTS – between semantic modelling, AI-driven retrieval (including the hybrid lexical-semantic approaches presented by the EBU, SRG SSR and BBC), and operational deployment – signals a structural shift in how EBU Members design their data architectures. EBUCorePlus is becoming the shared vocabulary that makes that shift coherent across systems, use cases and organizations.

Most recently, the working group has been improving the descriptions and definitions of EBUCorePlus classes, and developing tools that automatically check the ontology's internal consistency before each release. Both make the semantics of the model clearer – for humans reading the documentation and for AI systems learning from it.

If you have not yet explored EBUCorePlus, the working group is here to help. Start with the Ontology Explorer and join the conversation on GitHub.

See page 7 for more takeaways from the Data Technology Seminar. Find out more about the EBU Metadata Modelling working group here:
https://tech.ebu.ch/groups/mm

Building resilience into IP-based distribution as PSM move online

As EBU Members move audiences online and rely on cloud services, they need to understand the risks, writes **Paul Tweedy** (BBC), chair of the EBU Broadband Distribution Architectures group.

A forthcoming EBU recommendation, in draft at the time of writing, will give Members a lightweight 'risk register' of internet-related capabilities and dependencies, with practical mitigations against each one. The document is being produced within the Broadband Distribution Architectures working group, drawing on expertise from across Member organizations. Publication is expected in summer 2026.

The work responds to a structural shift. We increasingly depend on the internet as the primary means of both creating and delivering editorial content to our audiences. While this has enabled greater reach, innovation and immediacy, it has also introduced dependencies that are largely outside national broadcasters' control, and created new risks compared to the world of high-power, high-tower broadcast.

Many of the critical services underpinning online media distribution are no longer nationally owned or governed. Core internet functions are increasingly controlled by a small number of global, predominantly non-European companies, often subject to foreign legal frameworks, commercial priorities, and geopolitical pressures that European PSM organizations cannot influence. Recent years have shown the consequences: regional internet blackouts, sabotage of subsea cables disrupting cloud regions, and global platforms withdrawing or restricting services under legal or commercial pressure.

Business continuity planning spans a spectrum, from delivering critical information during an emergency to maintaining the full range of services and editorial offerings. Different levels require different architectural choices, but all now depend on identifying and addressing the most severe and likely risks.

Paul Tweedy at EBU HORIZONS 2026

RISK AREAS

One major risk area is the Domain Name System and trust infrastructure. DNS makes services reachable, while digital certs issued by a small set of trusted certificate authorities (CAs) underpin all secure communication over the internet. Concentration of trust anchors in a limited number of largely non-European CAs creates a structural vulnerability: governance failures, geopolitical conflict, or changes in trust stores on individual devices (which are controlled by multinationals) could render services unreachable or untrusted overnight.

Content Delivery Networks are another critical dependency. Although CDNs are engineered for technical resilience through geographically distributed infrastructure, the market has seen consolidation, financial instability, and dominance by non-European providers. Reliance on a single CDN exposes PSM organizations to service failure, withdrawal, price shocks, or jurisdictional conflicts. Much-needed capacity risks being deprioritized during high-demand events if global providers favour their own vertically integrated services, or higher-paying customers.

Cloud infrastructure presents similar challenges. Many PSM workflows – from content production to analytics and distribution – now rely on one of the few hyperscaler cloud platforms. These services are powerful and convenient but come with risks related to vendor lock-in, extraterritorial legislation, and sudden account-level disruption. European cloud alternatives exist but often lack the scale or feature breadth needed for all use cases, forcing careful consideration of where sovereignty matters most.

Internet and connectivity providers are less visible but equally important. Consolidation and foreign ownership of European internet service providers, increasing for many years, can introduce indirect exposure to non-European legal obligations or differing strategic priorities. In a similar way, app store distribution models create gatekeeper risks, where dominant non-European platforms can remove or restrict apps with limited recourse, potentially cutting off a major access channel to audiences.

PSM organizations must be proactive rather than reactive: to diversify suppliers, avoid unnecessary lock-in, maintain fallback delivery paths, and engage with local policymakers to recognize key internet components as critical infrastructure. By doing so, PSM organizations can reduce structural dependencies and ensure citizens continue to access trusted public service content even in times of crisis.

Paul Tweedy's presentation from HORIZONS 2026 is available to EBU Members on the tech-i app and via https://tech.ebu.ch/horizons2026

Nathalie Mastail-Hirosawa

Pipes, filters, and the triangle of trade-offs: broadcasters confront a sovereignty question at HORIZONS 2026

The EBU's HORIZONS conference – 5–6 May in Geneva – opened with a question that hung over every session: who, by 2035, will decide what audiences actually see? For two days, public service broadcasters, platform engineers, service operators and standards bodies circled that question, and almost every answer returned to one word: sovereignty.

Paul Tweedy, Head of Architecture for Digital Distribution at the BBC, pinned it down early. "80% plus of the audience will have just gone IP only anyway," he told the room, referring to that 2035 time horizon. Once the pipe shifted from broadcast spectrum to internet protocol, broadcasters would be forced into what he called the triangle of trade-offs between resilience, cost-efficiency and sovereignty (see page 9). Indeed, much of the panel conversation earlier that day wrestled with which corner of that triangle to defend first. Skander Ben Attia, CTO of France Télévisions, framed his broadcaster's recent partnership with YouTube as a way to reach younger viewers without cannibalizing the in-house product. Others in the room sounded less comfortable, suspecting that every audience handed to a US platform was a small piece of editorial control surrendered.

MANY-TO-ONE

Antonio Arcidiacono, EBU Director of Technology & Innovation, emphasized an alternative long-term view. He sketched an evolution from one-to-many broadcasting to what he called "many-to-one", in which AI at the edge – that is, on or near the in-home or mobile device – would curate and render content from multiple sources into a single personalized stream. His term for it was "AI-casting", and the message underneath was unambiguous: having control over the inference layer at the edge of the network was the only durable defence against being demoted by global gatekeepers.

"If we don't build the pipe," said Adde Granberg, Head of Innovation at SVT, in his talk, "someone else defines the filter". That filter would be, increasingly, an agent. Granberg sketched three audience archetypes for 2035. The first of those, the "served viewer" – whose morning news is pre-curated by an AI assistant before they reach for a screen – seemed as plausible as it was disruptive, implying that the broadcaster's app, that hard-won destination on the home screen, might simply be skipped.

Florence Hartmann, Head of the Media Intelligence Service at the EBU, shared numbers that underline how consequential this rise of agentic AI can be, with AI-based searches driving zero-click rates up to about 70 to 80 percent. She also cited an EBU study showing 45 percent of AI-generated news responses contained at least one significant problem.

Against that backdrop, trust would become a material asset rather than a value statement. Gilles Marchand, Director Emeritus of SRG SSR, expressed a notion that was echoed several times at the conference, arguing that the future would split between "artificial content" and "human touch" content, and that the latter's competitive advantage lay in something counter-intuitive: the willingness to acknowledge mistakes. Sterile perfection, he suggested, may be precisely what audiences would learn to distrust.

TECHNOLOGY FOUNDATIONS

HORIZONS also pulled the conversation into technical reality. If trust is at the brand layer, then capabilities and standards are some of the pillars on which it rests. Bram Tullemans, Senior Technical Programme Manager at the EBU, called DVB-I and HbbTV the "perfect couple", a coherent European stack that can protect broadcaster prominence on smart TVs without depending on the goodwill of OEM negotiations. Remo Vogel, Chair of the DVB Project and head of distribution strategy at rbb/ARD, walked through what a horizontal-market roll-out of DVB-I would actually look like in practice, the implication being that fragmented national pilots

Clockwise from top left: Panel discussion: Antonio Arcidiacono (EBU), Skander Ben Attia (France Télévisions), Stefan Kollinger (ORF), Annamaria Recchia (Eutelsat) Gilles Marchand, Director Emeritus of SRG SSR Wrapping up HORIZONS 2026: Bram Tullemans, Susanne Rath, Elena Puigrefagut, Antonio Arcidiacono, Hemini Mehta, Eoghan O'Sullivan, Paul Tweedy, Walid Sami, Lucille Verbaere; Florence Hartmann, Head of the EBU Media Intelligence Service Adde Granberg, Head of Innovation at SVT

have to converge if any of this is to register on a TV manufacturer's roadmap.

Will Law, Chief Architect in Akamai's Edge Technology Group, presented Media over QUIC (MOQ) through a multi-lane highway analogy, where audio, video and metadata travel in independent lanes so a single lost packet no longer stalls the whole stream. And Vincent Grivet, Chair of HbbTV, planted a flag for terrestrial broadcast on energy grounds, explaining that IP delivery uses 10 to 12 times more energy than broadcast for the same mass audience.

SOVEREIGNTY & RESILIENCE

Spectrum, predictably, surfaced as the political subtext under all of this. David Hemingway, Senior Distribution Manager at the BBC, in a session moderated by Susanne Rath, Senior Engineer at BR/ARD, walked the room provided an overview of the UHF band's status post-WRC-23 and the longer fight to defend it through 2031 and beyond, a reminder that sovereignty is also a question of who gets to keep their frequencies.

Resilience surfaced as a related concern: Ronald Lorenz of Media Broadcast GmbH described how 5G Broadcast could push emergency alerts to handsets that were in standby mode, even without a SIM card. Aurore Chatard, CSO of SRG SSR, had also focused on resilience in her talk the previous day, borrowing the armed-forces phrase "drill, rehearse, train": operational excellence counts for little if no one in the room knows who decides under pressure.

DOES IT SING?

By the closing session, Antonio Arcidiacono was asking a deceptively simple question of every technology under discussion: did it sing? Did it actually work for the audience? It landed as the right closing note. The conference's underlying anxiety, that public service media was being slowly disintermediated out of its own relationships, was real, but the answer being sketched by the attendees of this EBU conference was concrete enough: build the pipe. Hold the standards. Keep the trust. Put the intelligence at the edge, where the audience lives.

The presentations from HORIZONS 2026 are available to EBU Members on the tech-i app or via: https://tech.ebu.ch/horizons2026

Transcribed and drafted with AI under editorial direction; edited and fact-checked by the editorial team.

5G-EMERGE moves from architecture to deployment

Three years of work on a hybrid satellite-terrestrial-edge platform have produced a portfolio of components now approaching market readiness, writes **Elena Puigrefagut**.

5G-EMERGE set out to design a hybrid satellite-terrestrial-edge architecture for media delivery, on the premise that no single network can deliver universal coverage, resilience, low latency and cost-efficient scaling alone. The chosen approach combined satellite, terrestrial 5G and edge computing in a standards-based IP framework supporting linear, on-demand and interactive services. Three years on, the question is no longer whether the architecture works but how quickly its components reach the market.

DISTRIBUTED MODEL

The 5G-EMERGE architecture rests on a distributed functional model spanning content provisioning, near-edge processing, distribution, far-edge processing, content consumption and service control. The near edge handles prioritization, transformation and orchestration close to the source; the far edge performs local adaptation and delivery near the user. Service control coordinates the layers by exchanging control and telemetry data, enabling policy-driven, service-aware resource selection across multiple delivery paths.

A key principle is that multicast and broadcast are native delivery mechanisms, not fallbacks. Content generated once can travel over satellite using protocols designed for efficient one-to-many file delivery (FLUTE over UDP) and standard digital broadcast carriage (DVB-S2X), then be redistributed at the edge for direct-to-home, direct-to-edge or direct-to-vehicle scenarios; for the direct-to-device scenario, comparable functionality moves into the device itself.

The project is intentionally vendor-agnostic and built on open standards from DVB (including DVB-S2X), 3GPP (5G Media Streaming, 5G Broadcast and MBS) and the wider streaming ecosystem (CMAF, HLS and DASH). For interaction with mobile networks it uses CAMARA APIs – an open initiative exposing telecoms capabilities to applications in a standardized way – supporting content steering, demand control and network exposure.

Mostafa Khosrow (MinWave) presents the steerable phased-array antenna at HORIZONS 2026

The platform operates across satellite, broadcast, mobile and CDN domains without locking implementations to a single technology stack. Satellite and terrestrial infrastructure can be orchestrated as complementary resources, with traffic assigned dynamically by policy, availability and service requirements.

What has changed in the last year is the pace at which architectural work has crystallized into deployable components. Near-market-ready outputs now include electronically steerable antennas for home and vehicle use, low-cost multicast gateways for in-home redistribution, satellite-enabled backhaul and headend tools, and a 5G orchestrator mediating between satellite gateways and terrestrial 5G cores.

The project has also demonstrated protocol conversion, 5G Broadcast integration and a chip supporting NR-NTN (5G via satellite) with MBS (multicast/broadcast services) for direct-to-device delivery. Edge orchestration deploys and manages containerized services across satellite, terrestrial and edge infrastructure, with predictive caching pre-positioning popular content to reduce latency, bandwidth consumption and the carbon cost of redundant traffic on high-cost paths.

See: https://www.5g-emerge.com

5G-EMERGE at HORIZONS 2026

A dedicated session at the HORIZONS conference in May brought the components together. Kris Brown (Humans Not Robots) set out the satellite-enhanced media delivery concept, with multiple delivery paths from a single source and unified telemetry across them. Gil Laifer (Inverto) presented the multicast home gateway, already shown in commercial-grade demos and now in early deployment in Central America. Mostafa Khosrow (MinWave) showed a self-pointing phased-array antenna designed to remove installation cost, with a single ethernet cable carrying power, data and control. Peter Klinger (SwissTXT) demonstrated a business-continuity platform that generates sign-language avatars on the fly from predefined text. And Federico Pandolfi (Rai) explained how the same satellite-originated streams can feed 5G Broadcast via an adapter that converts DVB-NIP signalling to 3GPP format, reusing existing infrastructure.

Presentations are available to EBU Members via the tech-i app and at https://tech.ebu.ch/horizons2026

Nathalie Mastail-Hirosawa

Shaping Europe's digital future: why the Digital Networks Act matters

EU lawmakers will spend the next two years debating the DNA. **Vincent Sneed**, Senior EU Policy Adviser for the EBU, explains why public service media have a stake in the outcome.

The EU's Digital Networks Act (DNA) will play a key role in shaping how people across Europe access digital services and media, be it online or via terrestrial broadcasting, cable or satellite. At a time when connectivity underpins daily life, this EU legislation, a revision of the European Electronics Communications Code (EECC), offers an opportunity to strengthen digital infrastructures and access to media. It is important that media stakeholders, especially public service media, engage in its development, as media content and services are major drivers of demand for reliable, high-quality networks, online and offline.

The EBU has outlined key principles that must be safeguarded as the DNA is considered by EU lawmakers.


EBU

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Position paper

EU Digital Networks Act

Excellent connectivity and digital infrastructure in Europe are key. Public service media (PSM) drive the demand for network connectivity and play a crucial role in building digital sovereignty in Europe. PSM invest 22 billion EUR in media content every year and develop new services, formats, and technologies. They deliver reliable news and information to all people and foster democratic discourse across Europe.

The Digital Networks Act (DNA) must reflect the value media brings to society. Different means of distribution directly shape how people access and use media offerings. While electronic communications regulation should remain distinct from content regulation, it clearly has an impact on media pluralism, cultural diversity and consumer protection. EU decision makers must foremost safeguard people's ability to access and easily find and discover a diverse and pluralistic media offer, when and where they want, on networks and platforms that are resilient, efficient, and trusted. For live media consumption, terrestrial broadcast (such as DVB, DAB+ or FM) is a case in point and must be protected. On-demand media will continue to be delivered by Internet broadband (fibre, Wi-Fi, 5G), making it essential to maintain the open internet and ensure easy access to media online.

Below, we highlight the areas where the DNA proposal should be improved:

1. Ensuring the availability of broadcast radio in vehicles

Protecting the presence of analogue and digital terrestrial broadcast radio in vehicles is essential to ensure that listeners can easily access radio content. Radio plays a critical role in times of crisis and emergency, serving as a vital source of reliable information when other communication channels are disrupted. Terrestrial broadcasting is a secure, reliable, widely used, anonymous and free-to-air platform that provides direct access to radio without dependence on intermediaries, thereby reducing the risk that access to essential information is blocked or diverted. Radio remains the most trusted type of media and plays a key role in supporting an informed democratic society. It is most frequently listened to in vehicles, making in-car availability essential.

The DNA should ensure that analogue and digital terrestrial broadcast radio is available across vehicle categories, including passenger cars (M), commercial vehicles (N) and "mini-cars" (L6 and L7).

EU transparency register nr: 9328830161 5-56.

May 2026

1. Ensuring the availability of broadcast radio in vehicles
Protecting analogue and digital terrestrial radio in vehicles is essential to ensure easy access to content. Radio plays a vital role in times of crisis, providing reliable information when other channels are disrupted. Direct access, without intermediaries, reduces the risk of information being blocked or diverted. As radio is most frequently accessed in vehicles, in-car availability remains crucial.

2. Net neutrality must remain a cornerstone of the democratic online landscape
The net neutrality principle, as it is currently phrased, safeguards access to diverse content, and there is no evidence of market failure requiring changes. BEREC (the Body of European Regulators for Electronic Communications) has confirmed that the IP interconnection ecosystem functions effectively, supported by market dynamics and regulatory oversight. To maintain this efficient system, BEREC must remain independent and be the main entity supervising its implementation.

3. Preventing the emergence of network access fees through conciliation mechanisms
Although the DNA does not introduce network access fees, the proposed conciliation mechanism raises concerns. It could create pressure for content providers to contribute financially to network operators. Any additional financial burden on European content providers would reduce resources available for content production.

4. Safeguarding broadcasters' access to spectrum
Broadcasting services share spectrum with other essential services such as wireless production tools used in cultural and public events (known as PMSE tools, standing for programme making and special events). The long-standing sharing of the UHF band demonstrates efficient spectrum use. Public service media support core EU values, including freedom of expression, media pluralism, and cultural diversity, while addressing national and regional needs. The DNA must continue to recognize broadcasting specificities and national competences in spectrum management.

5. Securing access to general interest services
The DNA should ensure that services of general interest remain accessible. This includes preserving the must-carry principle, as well as access to EPGs (electronic programme guides) and open APIs. As technologies evolve, these tools remain essential for maintaining visibility and accessibility of content – and rules must evolve so they remain effective.

Over the next year and a half to two years, the European Commission, European Parliament and European Council will debate and refine the DNA. The EBU will continue to be actively involved in this file to remind lawmakers of the impact this far-reaching file may have on the media sector. The DNA has the potential to support a more connected, inclusive, and resilient Europe and the EBU's Legal and Policy team will advocate on behalf of our public service media Members, with an aim to safeguard access to audiences.

See: https://ebu.ch/legal-policy

Immersive audio is already here – let's master it together

Frédéric Changenet (Radio France) describes how a new training programme for EBU Members is helping public broadcasters' sound engineers get to grips with immersive audio production.

Immersive sound is everywhere – in concert halls, in our headphones, in cinemas, in our cars. We are often listening to immersive sound without even realizing it. After 70 years of stereo, immersive is starting to reshape traditional listening habits, and broadcasters need to think seriously about the new possibilities these technologies offer, how we can use them to create new listening experiences, and how we bring them to our audiences.

On-site sessions at Radio France provide hands-on experience

BEYOND STEREO

Immersive sound can be used in many ways across audio programming. In classical music, it brings greater fidelity, a stronger sense of being in the hall, and a more natural reproduction of the music. In radio drama and electronic music, the spatialization of sound carries meaning – it becomes part of the writing of the piece itself.

Immersive sound is in fact a very old idea. Composers have written with space in mind for centuries. What is remarkable today is that the technology can be handled by anyone, without any prior knowledge, specialist skills or specific devices. Thanks to binaural technology, simple headphones are all that is required.

It is often assumed that immersive sound is an extension of stereo. It is not. It is an entirely new way of thinking about sound reproduction. Learning the techniques of immersive audio production – and, more importantly, developing a critical reflection on what to do with them – is key to staying at the forefront.

For more than 15 years, Radio France has been deeply involved in immersive audio, with a dedicated team and a wide range of skilled engineers developing both production and distribution. This work has led to new formats including FIP 360 concerts, radio dramas, podcasts and classical music concerts, all available on the Radio France platform and app in stereo, binaural and 5.1 surround.

SHARING KNOWLEDGE

With the big tech companies now firmly among our competitors, it is essential that European public broadcasters help each other move into immersive production. That is why we created this training programme on immersive sound, designed specifically for sound engineers and radio producers in the EBU community.

The programme has two parts. The first is a series of three online sessions, open to anyone interested in the theory and technology of immersive sound. More than 50 people have attended so far. As part of these sessions, David Marston and Alan Archer-Boyd from the BBC delivered an intervention on binaural and object-based audio, which was a real highlight.

The second part consists of on-site sessions in Radio France's studios, dedicated to immersive recording and mixing for classical music. Across two days, the France Musique recording team shares its hands-on experience – which matters, because the theory of immersive recording techniques for classical music has not yet been written down. Nobody today can claim to have mastered every aspect of recording and mixing classical music in immersive. Participants experienced two days of passionate discussion between skilled professionals from across Europe, and a great opportunity for networking.

The field is still in its early days, and the natural next step would be a working group on recording classical music in immersive, focused on sharing experience and best practices and holding critical listening sessions. Further training programmes – on electronic music mixing, or on producing podcasts and dramas in immersive – are also worth considering.

The training is conceived and organized by Radio France with the EBU – with Pascale Labrie and Mireia Pacareu from EBU Music and Paola Sunna from EBU Technology & Innovation – and with the participation of the BBC colleagues mentioned above.

Remote production cuts emissions by 73% on Finnish-Spanish reality show

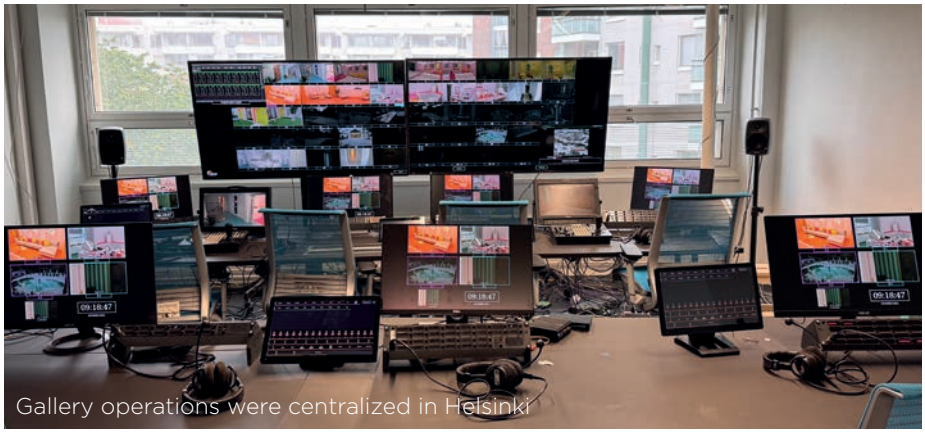
Ville Laakso and **Heidi Munkberg** from ITV Finland describe the workflow behind a 40-episode reality show filmed in Estepona but galleried and edited from Helsinki – and the sustainability dividend it delivered.

Remote production is often discussed as a way to save money or reduce travel, but the case presented here shows something bigger: it can reshape how large-scale television is built, managed and delivered. In this production model, a reality show with 40 episodes was executed across Spain and Finland, with the cast and much of the physical filming taking place in Estepona, while gallery operations and post-production were centralized in Helsinki.

What makes the setup notable is not just the geography but the technical discipline behind it. The production used 40 PTZ cameras – pan-tilt-zoom units that can be operated remotely – alongside four ENG (electronic news gathering) crews working in the field. Yet instead of sending every camera feed back to Helsinki individually, the team encoded and transmitted only five programme streams and six monitoring streams, reducing the number of streams from 40 to 11. That gave the team firm control over bandwidth, complexity and reliability while preserving editorial flexibility for the gallery in Finland.

KEEPING LATENCY LOW

Latency is usually the biggest obstacle in remote production, but this project kept round-trip latency at 72 milliseconds in Season 6, low enough to support responsive live decision-making. Most of the operational equipment stayed at the villa in Spain, while control infrastructure was based in Finland, allowing the core team to work remotely without giving up oversight of the show. Editing also moved to Finland, where a four-day rotation was used across five streams: filming, media management and assisting, editing, and mastering.



Gallery operations were centralized in Helsinki

The project also shows how critical infrastructure planning is in remote environments. The team used redundant connectivity with two dark fibre routes and a shared last-mile connection designed specifically for the location, plus a 1 Gbps public internet backup. That backup strategy protected the workflow and helped avoid recording losses, while an emergency gallery in Spain added half-day recording and storage capacity as a further safety net.

SUSTAINABILITY GAINS

Beyond the technical achievement, the workflow delivered measurable sustainability gains. The carbon footprint fell by 73% compared with the earlier seasons, with transportation alone dropping by 77%. Because the main team worked from Finland, the production avoided much of the travel and accommodation burden associated with traditional on-location workflows. The remote gallery also used green energy, and generators in Spain were used less often.

The broader lesson is clear: remote production is no longer just a workaround. When it is designed from the planning stage, it can improve resilience, reduce environmental impact and maintain broadcast quality at scale. This case demonstrates a practical blueprint for future productions that want to move less, transmit smarter and keep creative control intact.

Join the EBU Green Production Group

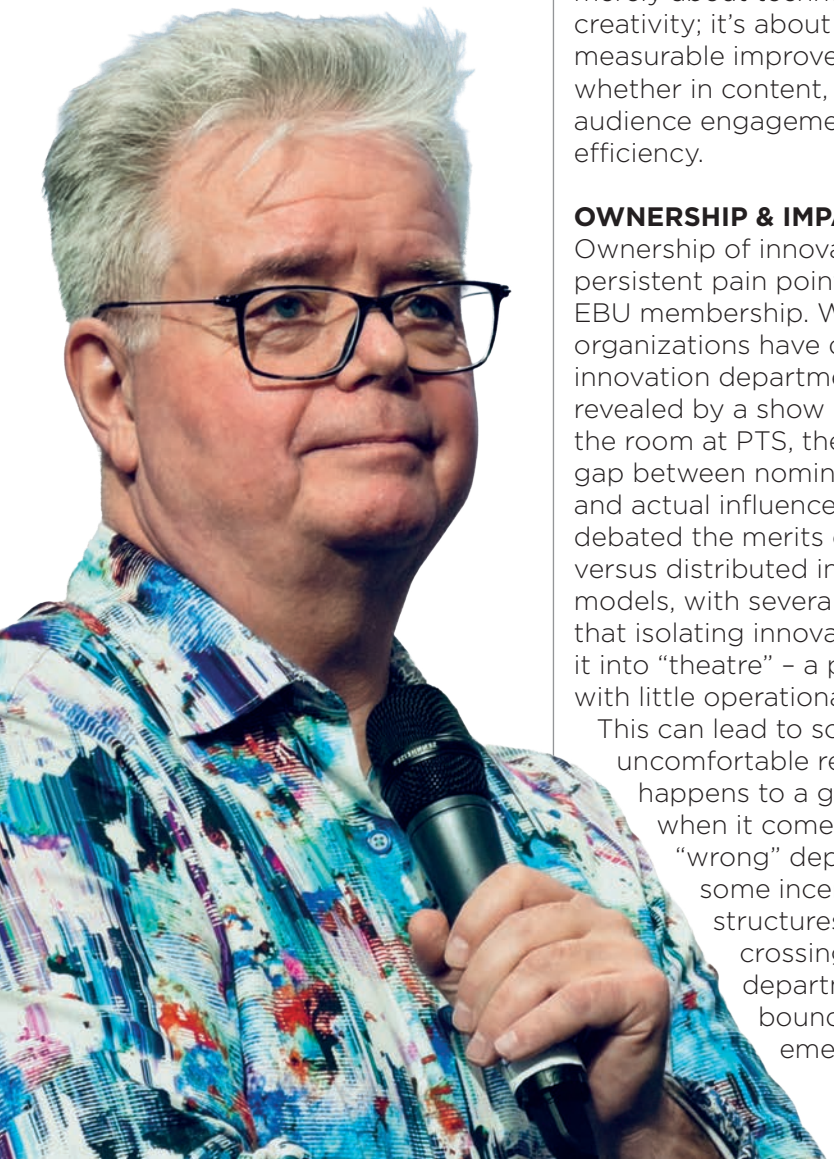
The EBU Green Production Group, chaired by Roser Canela-Mas of ITV, brings members together to understand green production, share approaches to implementation, and drive sustainable transformation across the industry. It's about making sustainable production a 'business as usual' way of working. Recent activities include the publication of a guide to alternative energy supplies on location and collaboration on sports production sustainability with the IBU (International Biathlon Union). The group also contributes to the annual EBU Sustainability Summit. The ITV Finland case described here was first presented to the group.

Find out more at https://tech.ebu.ch/groups/greenproduction

Getting real about innovation in public media

Morten Brandstrup (TV 2 Denmark) reflects on the discussion he moderated at this year's EBU Production Technology Seminar, where he aimed to cut through the hype and get real about the role and goals of innovation.

Innovation is in every strategy deck right now. But when budgets get tight, it is often the first thing that quietly disappears. I had the pleasure of moderating a panel on innovation earlier this year, at the EBU Production Technology Seminar, with four distinguished colleagues: Adde Granberg (SVT), Skander Ben Attia (France Télévisions), Eivind Halle (TV 2 Norway), and Conrad Gouws (RTÉ). With their help, I wanted to get to the heart of what innovation actually means for public service media, who drives it, and why it matters more than ever.



Morten Brandstrup, Head of News Technology at TV 2 Denmark

I challenged the group to move beyond buzzwords and share their most unvarnished opinions. Each brought a distinct national context and organizational philosophy, but all share a commitment to making innovation a core capability, not a side project.

We began with a provocation: when your CEO says, "we must innovate," what does that actually mean in practice? Is it just *change* with better branding, or is there a substantive difference?

Innovation is only realized when new ideas are implemented to create real value. It's not merely about technology or creativity; it's about delivering measurable improvements, whether in content, workflows, audience engagement, or cost efficiency.

OWNERSHIP & IMPACT

Ownership of innovation is a persistent pain point across the EBU membership. While some organizations have dedicated innovation departments, as revealed by a show of hands in the room at PTS, there is often a gap between nominal ownership and actual influence. The panel debated the merits of centralized versus distributed innovation models, with several warning that isolating innovation can turn it into "theatre" – a performance with little operational impact.

This can lead to some uncomfortable realities. What happens to a great idea when it comes from the "wrong" department? Do some incentive structures discourage crossing departmental boundaries? What emerged from our discussion was the need for shared ownership, supported by clear governance, avoiding the kind of bureaucracy that stifles agility and risk-taking.

CREATING VALUE

As mentioned above, innovation can often suffer during lean times. Too often, when budgets shrink, innovation is sacrificed, or it becomes a rhetorical flourish with no funding behind it. Yet, there are low-cost innovation methods – lean experiments, rapid pilots, and iterative development – that can yield outsized impact without breaking the bank. The key is to avoid pilots that never scale and to focus on innovations that demonstrably enhance public value.

A thorny question lingers: if innovation isn't funded, should it even appear in the strategy deck? Our PTS panel agreed that credibility demands hard choices. Sometimes, that means stopping old activities to make space for new ones. The one thing to protect is innovation itself because, as our final takeaway made clear, "innovation isn't the problem; ownership, governance, and funding are."

In public media's race to stay relevant, innovation can't be a passing trend or a department's isolated endeavour. It must be a shared mindset, embedded in strategy, resourced accordingly, and measured by the value it delivers to audiences and society. That, more than any buzzword, is what will define the future.

The PTS 2026 panel discussion on innovation moderated by Morten Brandstrup is available to EBU Members on the tech-i app and at https://tech.ebu.ch/pts2026

Inheriting a great legacy – transitioning bmx from the BBC to the EBU

Nicolai Otto (MainConcept) and **Harald Jordan** (ORF) introduce the new EBU stewardship of bmx, the long-standing open-source MXF toolkit that has set the standard-compliance benchmark for nearly 15 years.

The timing and location couldn't have been better. At the EBU MXF Plugfest in September 2025, the community was invited to a presentation by Thomas Heritage of BBC R&D where he announced that the broadcaster's bmx project would transition to the EBU. While this marks the end of an era, it by no means marks the end of the project. It is a new beginning.

EARLY DEVELOPMENTS

MXF, the Material Exchange Format, is the SMPTE container standard at the heart of file-based broadcast workflows. BBC was an early adopter, and its 2006 Ingex project produced the libMXF and libMXF++ libraries for working with MXF files. The bmx Suite, started in 2011, was built on top of those libraries. Both were architected by Philip de Nier of BBC R&D, whose name remains prominent across the project's SourceForge and GitHub repositories.

Originally designed to read and ingest files from P2 cards (a tapeless camera format), the project quickly evolved and format support was extended. bmx was built to enforce strict standards and to ensure these files remain accessible for decades. For this reason, bmx MXF files are often considered as the benchmark in terms of standard compliance.

bmx today consists of several tools that allow forensic engineering around MXF files. A core component of the suite, bmxtranswrap is primarily used in automated workflows to rewrap or normalize MXF containers. It performs high-speed extractions directly from MXF files, preserving the original video and audio quality without the need for transcoding.

The transition was announced at last year's MXF Plugfest

Beyond being a quick, elegant and (mostly) free way to solve production challenges, open-source projects like bmx play a deeper role in the industry. Developers can quickly adjust the code to add features or tailor the tools to their needs. Standardization groups can implement and validate future standards 'in real time' to accelerate market adoption, reduce time between standardization and development and, last but not least, identify and address issues in future standards during implementation.

bmx supported BBC's adoption of IMF for UHD deliveries (SMPTE RDD 59-1), helped validate AMWA's AS-02 specification and was a key enabler of AMWA AS-11 UK DPP. Additionally, other companies have used forks of bmx to develop HDR and next-generation-audio (NGA) production workflows around MXF files. Currently, the Audio Definition Model working groups in the EBU are relying on bmx while defining new profiles.

TRANSITION TO EBU

BBC's decision to transition the maintenance of bmx to the EBU was carefully planned. It was clear that the largest share of bmx users was broadcasting facilities. Also, it was clear that the same group of people had the best insight into requirements. Consequently, a group of maintainers was established, consisting of two representatives of public broadcasters and two representatives of commercial software manufacturers (both members of AMWA, a partner organization of the EBU).

This combination of background, knowledge and network will ensure that the idea of bmx will continue to live and thrive just like the BBC originally intended it to.

Now, a few months into maintaining the project, we are getting ready to release an initial EBU version of bmx. Version 1.7 will feature improvements and new build targets with support for Linux on ARM platforms. It is mainly a transitional version with a lot of housekeeping going on in the background.

Some interesting pull requests are in the pipeline, with some already in review, so we can be certain that version 1.7 will not be the only release in 2026 ensuring we deliver valuable features created by the community to the community.

The EBU's bmx repository can be found at https://github.com/ebu/bmx/

Open Sources is a new tech-i series highlighting open-source tools and projects used in the media and broadcast community that deserve wider attention. Browse the full catalogue at https://github.com/ebu/awesome-broadcasting

Broadcast and IP will share the future of European radio

The EBU's Media Intelligence Service has published a new report on how radio is distributed across Europe. **Matthieu Rawolle** shares some of the findings.

Combining data on technical coverage, listening habits, devices and public service media strategies, the latest MIS report examines how radio is delivered today and how distribution is expected to evolve. The picture is one of both stability and change: traditional broadcast platforms remain dominant, but IP distribution is expanding, leading to increasingly fragmented listening.

FM continues to account for the largest share of listening in 28 out of 31 markets. Its dominance is supported by near-universal coverage and deeply rooted habits.

DAB/DAB+ plays a leading role in Norway, Switzerland and the UK. In around four in ten of the markets studied, it is well established but not dominant, while close to two in ten are still in trial or early deployment phases and more than a quarter have no DAB.

At the same time, IP distribution is gaining importance. In markets such as the Netherlands and Switzerland, IP listening now rivals FM and DAB/DAB+, reflecting a gradual shift toward multi-platform consumption.

Figure 1. Radio Radio listening time per device – in % of total; average of 6 EBU markets (Belgium French, France, Ireland, Sweden, Türkiye based on 2024 data and United Kingdom based on 2025 data). The bar in grey represents "other devices".
Sources: EBU based on Members' data and RAJAR's Audio Time.

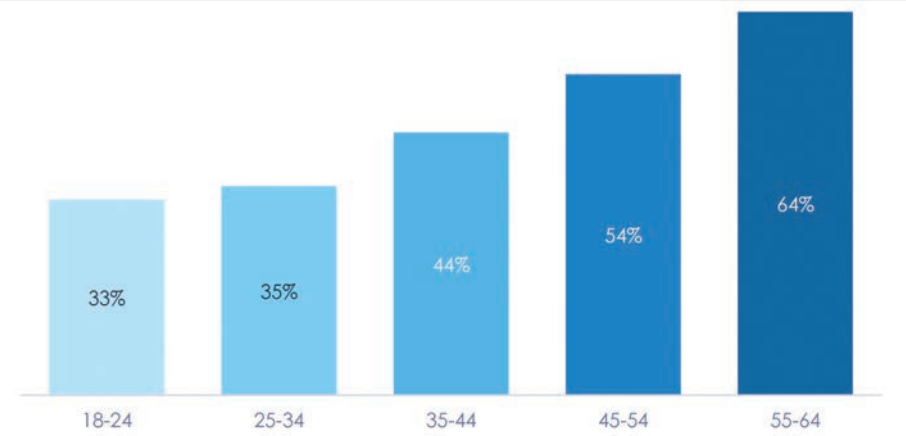


Figure 2. Household ownership of radio - in % of internet users, per age group; average of 12 EBU markets (Austria, Belgium, Finland, France, Germany, Italy, Netherlands, Poland, Spain, Sweden, Switzerland, United Kingdom), 2025 data.
Sources: EBU based on Statista

DEVICES & HABITS

Radio receivers remain central: car radios and fixed or portable sets together account for 74% of the total radio listening time. Smartphones represent 9%, while TVs, smart speakers and computers each contribute around 5%, with significant variations across markets (Fig. 1).

Radio devices still play a major role in listening and help explain the continued strength of FM and DAB/DAB+. However, future developments will depend on in-car audio environment and device ownership at home. In this respect, ownership levels of radio devices at home among under-35s are almost half those of 55–64-year-olds (Fig. 2).

HYBRID MODELS

Public service media advocate different distribution strategies. Some support a combination of FM, DAB/DAB+ and IP, while others prioritize FM and IP or DAB/DAB+ and IP.

Among the 31 organizations surveyed, IP is the most frequently cited platform. However, none supports an IP-only future. All maintain at least one terrestrial network, underlining the continued importance of broadcast radio. This reflects not only entrenched listening habits, but also the resilience of terrestrial networks, which remain essential in times of crisis.

Radio distribution is evolving towards a hybrid model combining broadcast and IP. For broadcasters, the challenge will be to manage this complexity while ensuring radio remains visible and accessible across all platforms. In this context, maintaining strong visibility and seamless access to radio, especially in cars, will be essential for radio broadcasters.

EBU Members can access the Radio Distribution in Europe report by visiting https://www.ebu.ch/resources and clicking on Research.

Sources: EBU based on Members' data and Statista.

EBU T&I videos on demand

A selection of recent additions to our rich library of videos from EBU Technology & Innovation events, available from our website and the tech-*i* app (https://tech-i.ch/download.html).

Estonia's 5G Broadcast "Pocket Siren"
Kristo Kaasan (Levira)

From the HORIZONS 2026 session on media during crises

Creating a harmonious metadata hub using EBUCorePlus
Wink van Zon, Jennifer Cools, Mark Frankle (NPO)

From the Data Technology Seminar 2026

How to do EBU QC for audio and ADM?
Dan Tatut (Marquise Technologies)

Webinar for Audio Definition Model implementers

IN THE SPOTLIGHT

Massimiliano Babbucci

Head of Digital Innovation, RSI; Chair of EBU SP Connect

What are your current responsibilities?
At RSI (the Italian-language unit of Switzerland's public broadcaster, SRG SSR), I lead Digital Innovation, which means working with colleagues on how technology can really help our editorial, production and distribution work. For SRG SSR more broadly, I am also mandated as Technical Liaison Officer to the EBU and part of the National AI Services Team. I see my role very much as building bridges between people, ideas, and organizations.

What do you consider as your finest achievement so far in your career?
One thing I am really proud of is the technology hub we created with the Institute of Information Systems and Networking (ISIN) at the University of Applied Sciences and Arts of Southern Switzerland (SUPSI) in Lugano. I like the fact that it brings together academic research and the concrete needs of public service media. For me, innovation becomes meaningful when it leaves the lab and starts helping people do better work.

What are your predictions for media technology in the future?
I think the future will be less about choosing one technology and more about combining several of them intelligently. IP, broadcast and satellite all have a role to play. AI will be an essential tool for operational efficiency, but only if we use it with clear values: trust, security, openness and responsibility.

What, for you, are the biggest challenges for EBU Members today?
We have to change quickly, but without losing who we are. That is not easy. EBU Members need to stay visible in a world dominated by global platforms, manage costs, move towards IP, and use AI wisely while still protecting independence, trust and universal access.

Tell us about some of your interests away from the workplace.
Outside work, I like woodworking and metalwork. Working with wood or steel is very different from digital technology, but I find it very inspiring. The material gives you immediate feedback. You cannot cheat the process. You need patience, precision and care and I like that. Whether physical objects or complex media systems, are built step by step, with care and intention.

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